

REPLACEMENT SHEET

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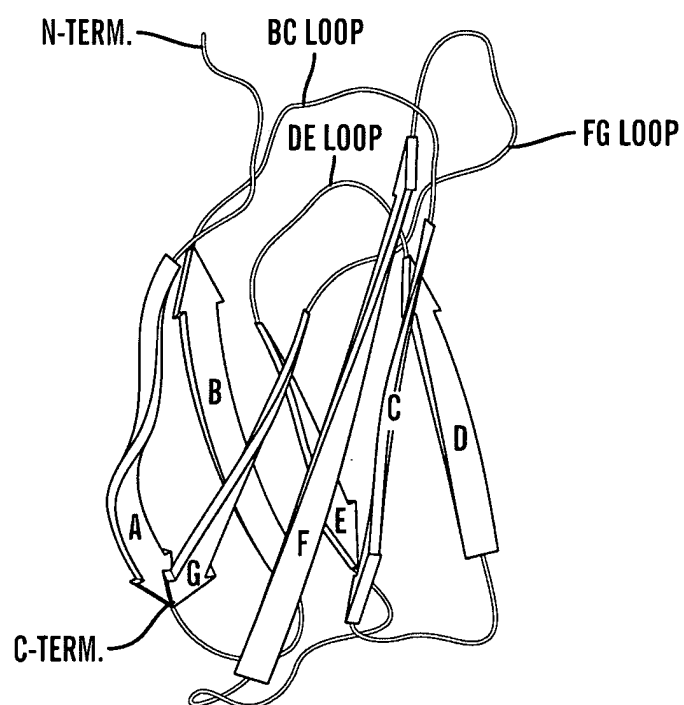


FIG. 1A

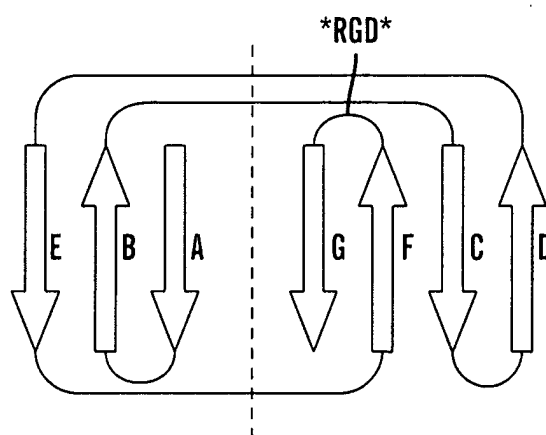


FIG. 1B

REPLACEMENT SHEET

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NdeI

CATATGCAGGTTTCTGATGTTCCGCGTGACCTGGAAGTTGTTGCTGCGACCCCGACTAGC
MetGlnValSerAspValProArgAspLeuGluValAlaAlaThrProThrSer
-2 -1 1 10

BclI PvuII

PstI

BsiWI

CTGCTGATCAGCTGGGATGCTCCTGCAGTTACCGTGCGTTATTACCGTATCACGTACGGT
LeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGly
20 30

EcoRI

GAAACCGGTGGTAACTCCCCGGTTCAGGAATTCACCTGTACCTGGTTCCAAGTCTACTGCT
GluThrGlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAla
40 50

SalI

Bst1107I

ACCATCAGCGGCCTGAAACCGGGTGTCGACTATACCATCACTGTATACGCTGTTACTGGC
ThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGly
60 70

SacI

XhoI

CGTGGTGACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACCTACCGTACCTAGTAACTC
ArgGlyAspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr
80 90

BamHI

GAGGATCC

FIG. 2

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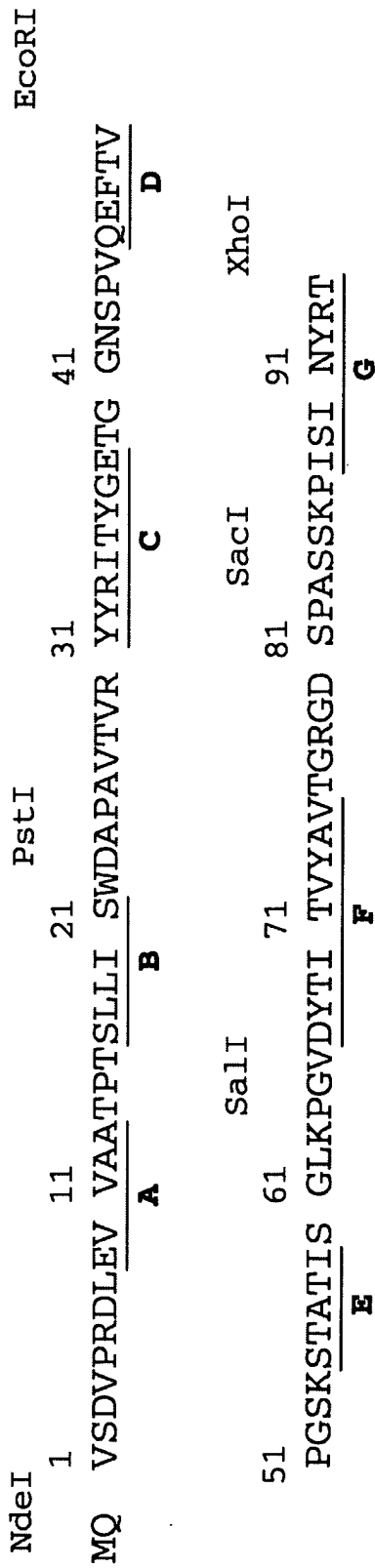


FIG. 3A

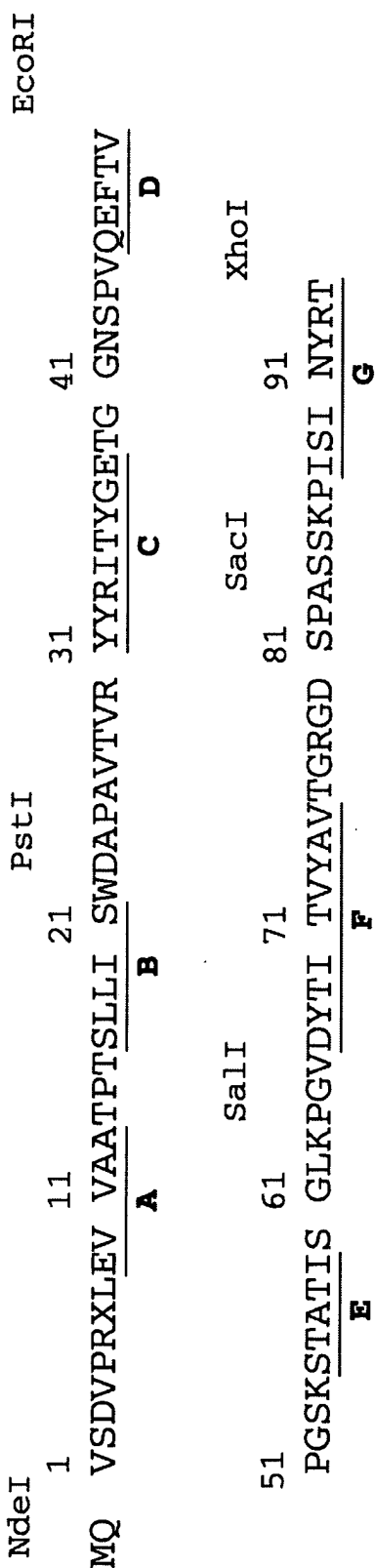


FIG. 3B

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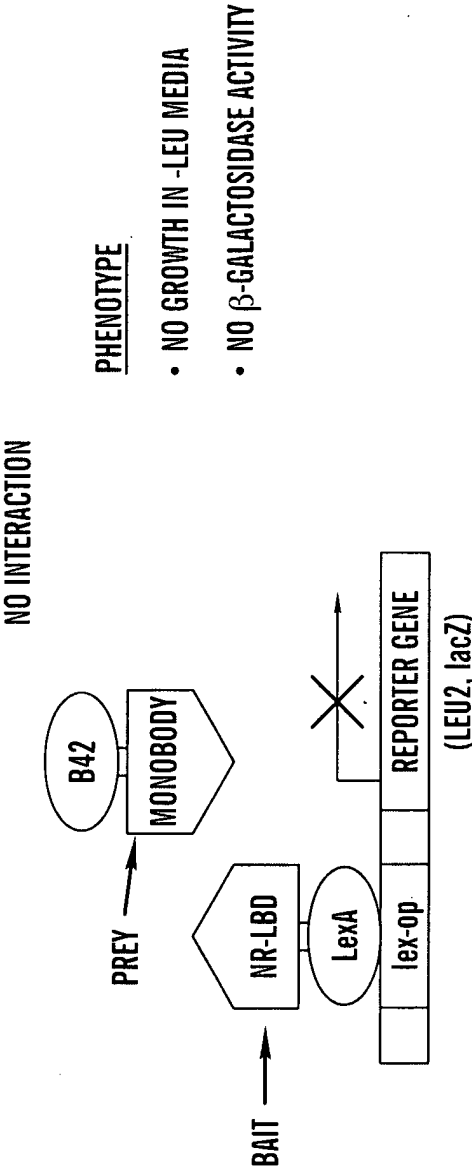
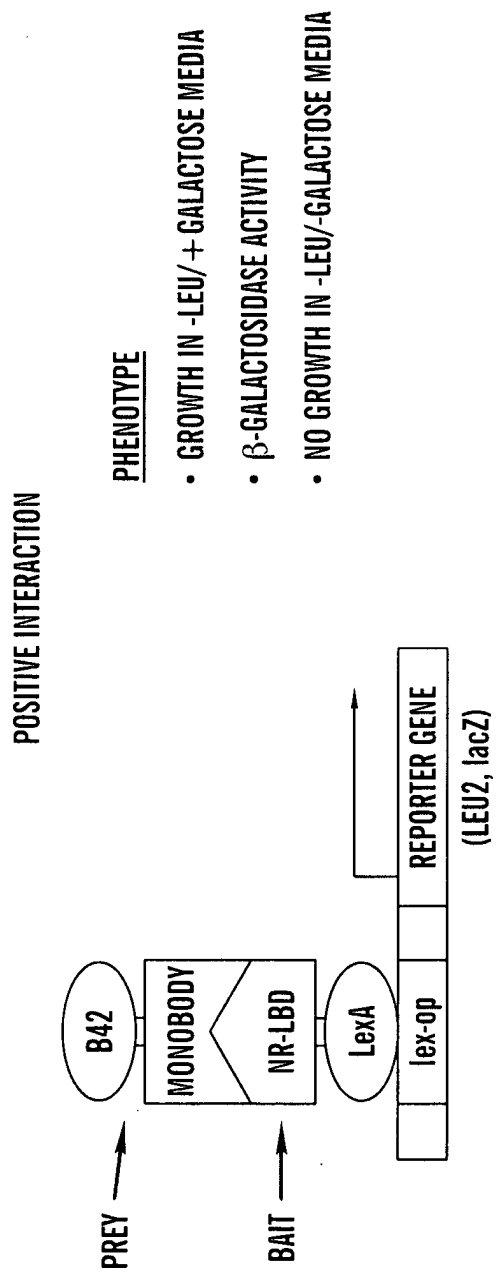


FIG. 4A

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**FIG. 4B**

REPLACEMENT SHEET

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ATGGACTACAAGGACGACGATGACAAGGGTATGCAGGTTTCTGATGTTCCGACCGACCTG
MetAspTyrLysAspAspAspAspLysGlyMetGlnValSerAspValProThrAspLeu

PvuII

GAAGTTGTTGCTGCGACCCCGACTAGCCTGCTGATCAGCTGGGATGCTCCTNNKNNKNNK
GluValValAlaAlaThrProThrSerLeuLeuIleSerTrpAspAlaProXaaXaaXaa

EcoRI

NNKNNKTATTACCGTATCACGTACGGTGAAACCGGTGGTAACTCCCCGGTTCAGGAATTC
XaaXaaTyrTyrArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPhe

SalI

ACTGTACCTGGTTCCAAGTCTACTGCTACCATCAGCGGCCTGAAACCGGGTGTGACTAT
ThrValProGlySerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyr

ACCATCACTGTATACGCTGTTACTGGCNNKNNKNNKNNKNNKNNKNNKTCCAAGCCAATC
ThrIleThrValTyrAlaValThrGlyXaaXaaXaaXaaXaaXaaXaaSerLysProIle

KpnI

TCGATTAACCTACCGTACCAGTGGTACCGGTGGTTCCTCCAAAAAGAAGAGAAAGGTA
SerIleAsnTyrArgThrSerGlyThrGlyGlySerProProLysLysLysArgLysVal

GCTGGTATCAATAAAGATATCGAGGAGTGCAATGCCATCATTGAGCAGTTTATCGACTAC
AlaGlyIleAsnLysAspIleGluGluCysAsnAlaIleIleGluGlnPheIleAspTyr

CTGCGCACCGGACAGGAGATGCCGATGGAAATGGCGGATCAGGCGATTAACGTGGTGCCG
LeuArgThrGlyGlnGluMetProMetGluMetAlaAspGlnAlaIleAsnValValPro

GGCATGACGCCGAAAACCATTCTTCACGCCGGGCGCCGATCCAGCCTGACTGGCTGAAA
GlyMetThrProLysThrIleLeuHisAlaGlyProProIleGlnProAspTrpLeuLys

TCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAACGATACCAGCCTCTTGCTGAGTGGA
SerAsnGlyPheHisGluIleGluAlaAspValAsnAspThrSerLeuLeuLeuSerGly

XhoI SphI

GATTAACCTCGAGGCATGC

Asp...

FIG. 5

REPLACEMENT SHEET

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ATGGGTAAGCCTATCCCTAACCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCCGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

KpnI

HindIII

SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGNNSNNSNNSNNS
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProXaaXaaXaaXaa

PvuII

PstI

NNSNNSNNSACTAGCCTGCTGATCAGCTGGGATGCTCCTGCAGTTACCGTGCGTTATTAC
XaaXaaXaaThrSerLeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyr

EcoRI

CGTATCACGTACGGTGAAACCGGTGGTAACTCCCCGGTTCAGGAATTCAGTGTACCTGGT
ArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPheThrValProGly

SalI

TCCAAGTCTACTGCTACCATCAGCGGCCTGAAACCGGGTGTGCGACTATACCATCACTGTA
SerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrVal

SacI

TACGCTGTTACTGGCCGTGGTGACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAAGTAC
TyrAlaValThrGlyArgGlyAspSerProAlaSerSerLysProIleSerIleAsnTyr

XhoI SphI

CGTACCTAGTAACTCGAGGCATGC

ArgThr.....

FIG. 6

REPLACEMENT SHEET

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ATGGGTAAGCCTATCCCTAACCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCCGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

KpnI

HindIII

SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII

ATCAGCTGGGATGCTCCTNNKNNKNNKNNKNNKTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProXaaXaaXaaXaaXaaTyrTyrArgIleThrTyrGlyGluThr

EcoRI

GGTGGTAACTCCCCGGTTCAGGAATTCACGTGACCTGGTTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAlaThrIle

SalI

AGCGGCCTGAAACCGGGTGTCTGACTATACCATCACTGTATACGCTGTTACTGGCNNKNNK
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyXaaXaa

XhoI SphI

NNKNNKNNKNNKNNKTCCAAGCCAATCTCGATTAACTACCGTACCTAGTAACTCGAGGCA
XaaXaaXaaXaaXaaSerLysProIleSerIleAsnTyrArgThr.....

TGCATCTAGAGGGCCGCATCATGTAATTAGTTATGTCACGCTTA

FIG. 7

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REPLACEMENT SHEET

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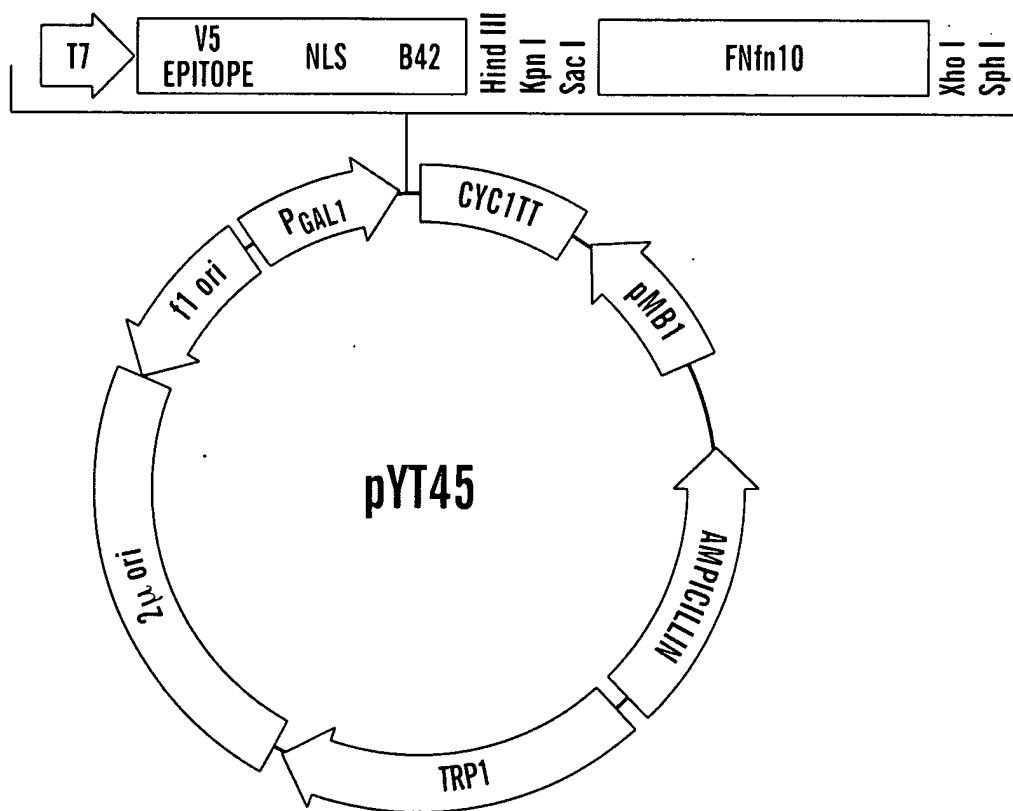


FIG. 9

REPLACEMENT SHEET

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ATGGGTAAGCCTATCCCTAACCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCCGGGCATGACGCCGAAAACCATTCCTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

HindIII/KpnI/SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII

PstI

ATCAGCTGGGATGCTCCTGCAGTTACCGTGCGTTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGlyGluThr

EcoRI

GGTGGTAACTCCCCGGTTCAGGAATTCAGTGTACCTGGTTCGAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAlaThrIle

SalI

AGCGGCCTGAAACCGGGTGTGCGACTATACCATCACTGTATACGCTGTTACTGGCCGTGGT
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyArgGly

SacI

XhoI SphI

GACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACTACCGTACCTAGTAACTCGAGGCA
AspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr.....

TGC

FIG. 10

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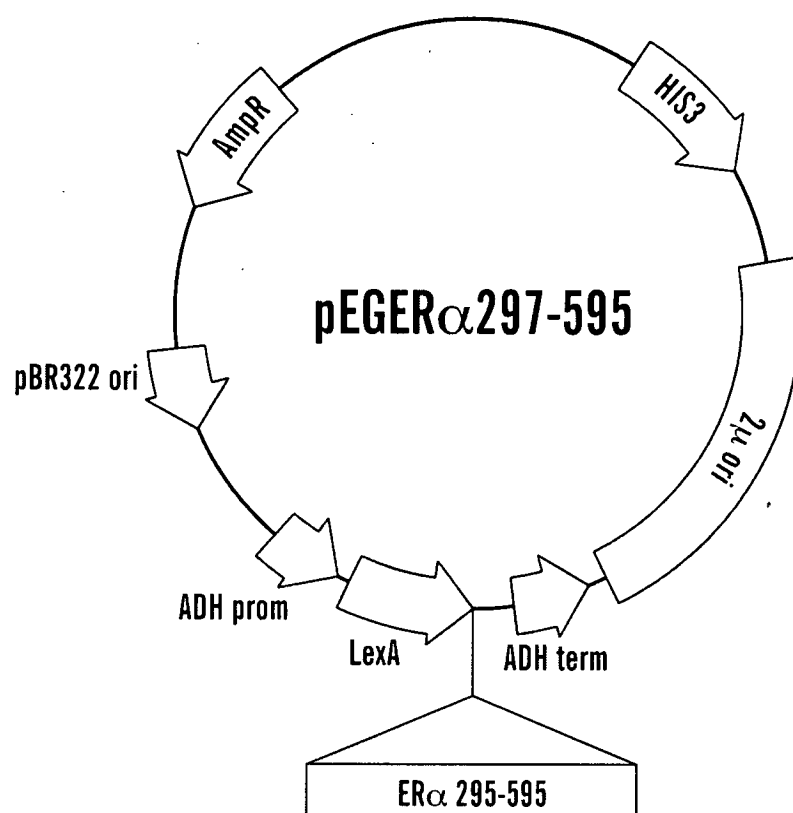


FIG. 11

REPLACEMENT SHEET

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ATGAAAGCGTTAACGGCCAGGCAACAAGAGGTGTTTGATCTCATCCGTGATCACATCAGC
MetLysAlaLeuThrAlaArgGlnGlnGluValPheAspLeuIleArgAspHisIleSer

CAGACAGGTATGCCCGCGACGCGTGCAGAAATCGCGCAGCGTTTGGGGTTCCGTTCCCCA
GlnThrGlyMetProProThrArgAlaGluIleAlaGlnArgLeuGlyPheArgSerPro

AACGCGGCTGAAGAACATCTGAAGGCGCTGGCACGCAAAGGCGTTATTGAAATTGTTTCC
AsnAlaAlaGluGluHisLeuLysAlaLeuAlaArgLysGlyValIleGluIleValSer

GGCGCATCACGCGGGATTCTGTGTTGCAGGAAGAGGAAGAAGGGTTGCCGCTGGTAGGT
GlyAlaSerArgGlyIleArgLeuLeuGlnGluGluGluGluGlyLeuProLeuValGly

cgtgtggctgccggtgaaccacttctggcgcaacagcatattgaaggtcattatcaggtc
ArgValAlaAlaGlyGluProLeuLeuAlaGlnGlnHisIleGluGlyHisTyrGlnVal

GATCCTTCCTTATTCAAGCCGAATGCTGATTTCTGCTGCGCGTCAGCGGGATGTTCGATG
AspProSerLeuPheLysProAsnAlaAspPheLeuLeuArgValSerGlyMetSerMet

AAAGATATCGGCATTATGGATGGTGACTTGCTGGCAGTGCATAAACTCAGGATGTACGT
LysAspIleGlyIleMetAspGlyAspLeuLeuAlaValHisLysThrGlnAspValArg

AACGGTCAGGTCGTTGTTCGCACGTATTGATGACGAAGTTACCGTTAAGCGCCTGAAAAAA
AsnGlyGlnValValValAlaArgIleAspAspGluValThrValLysArgLeuLysLys

CAGGGCAATAAAGTCGAAGTGTGCCAGAAAATAGCGAGTTTAAACCAATTGTTCGTAGAT
GlnGlyAsnLysValGluLeuLeuProGluAsnSerGluPheLysProIleValValAsp

CTTCGTCAGCAGAGCTTACCATTGAAGGGCTGGCGGTTGGGGTTATTCGCAACGGCGAC
LeuArgGlnGlnSerPheThrIleGluGlyLeuAlaValGlyValIleArgAsnGlyAsp

SacI

EcoRI HindIII

TGGCTGGAATTCAAGCTTGAGCTCGGCGGCAGCGGTATGATCAAACGCTCTAAGAAGAAC
TrpLeuGluPheLysLeuGluLeuGlyGlySerGlyMetIleLysArgSerLysLysAsn

AGCCTGGCCTTGTCCCTGACGGCCGACCAGATGGTCAGTGCCTTGTGGATGCTGAGCCC
SerLeuAlaLeuSerLeuThrAlaAspGlnMetValSerAlaLeuLeuAspAlaGluPro

HindIII

CCCATACTCTATTCCGAGTATGATCCTACCAGACCCTTCAGTGAAGCTTCGATGATGGGC
ProIleLeuTyrSerGluTyrAspProThrArgProPheSerGluAlaSerMetMetGly

FIG. 12A

REPLACEMENT SHEET

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TTACTGACCAACCTGGCAGACAGGGAGCTGGTTCACATGATCAACTGGGCGAAGAGGGTG
LeuLeuThrAsnLeuAlaAspArgGluLeuValHisMetIleAsnTrpAlaLysArgVal

XbaI

CCAGGCTTTGTGGATTTGACCCTCCATGATCAGGTCCACCTTCTAGAATGTGCCTGGCTA
ProGlyPheValAspLeuThrLeuHisAspGlnValHisLeuLeuGluCysAlaTrpLeu

GAGATCCTGATGATTGGTCTCGTCTGGCGCTCCATGGAGCACCCAGTGAAGCTACTGTTT
GluIleLeuMetIleGlyLeuValTrpArgSerMetGluHisProValLysLeuLeuPhe

GCTCCTAACTTGCTCTTGGACAGGAACCAGGGAAAATGTGTAGAGGGCATGGTGGAGATC
AlaProAsnLeuLeuLeuAspArgAsnGlnGlyLysCysValGluGlyMetValGluIle

PstI

TTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGGAG
PheAspMetLeuLeuAlaThrSerSerArgPheArgMetMetAsnLeuGlnGlyGluGlu

TTTGTGTGCCTCAAATCTATTATTTTGCTTAATTCTGGAGTGTACACATTTCTGTCCAGC
PheValCysLeuLysSerIleIleLeuLeuAsnSerGlyValTyrThrPheLeuSerSer

ACCCTGAAGTCTCTGGAAGAGAAGGACCATATCCACCGAGTCCTGGACAAGATCACAGAC
ThrLeuLysSerLeuGluGluLysAspHisIleHisArgValLeuAspLysIleThrAsp

PstI

ACTTTGATCCACCTGATGGCCAAGGCAGGCCTGACCCTGCAGCAGCAGCACCAGCGGCTG
ThrLeuIleHisLeuMetAlaLysAlaGlyLeuThrLeuGlnGlnGlnHisGlnArgLeu

GCCCAGCTCCTCCTCATCCTCTCCACATCAGGCACATGAGTAACAAAGGCATGGAGCAT
AlaGlnLeuLeuLeuIleLeuSerHisIleArgHisMetSerAsnLysGlyMetGluHis

CTGTACAGCATGAAGTGCAAGAACGTGGTGCCCTCTATGACCTGCTGCTGGAGATGCTG
LeuTyrSerMetLysCysLysAsnValValProLeuTyrAspLeuLeuLeuGluMetLeu

GACGCCCACCGCCTACATGCGCCCACTAGCCGTGGAGGGGCATCCGTGGAGGAGACGGAC
AspAlaHisArgLeuHisAlaProThrSerArgGlyGlyAlaSerValGluGluThrAsp

CAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCCTTGCAAAAGTATTACATC
GlnSerHisLeuAlaThrAlaGlySerThrSerSerHisSerLeuGlnLysTyrTyrIle

XhoI

ACGGGGGAGGCAGAGGGTTCCCTGCCACAGTCTGACTcgag
ThrGlyGluAlaGluGlyPheProAlaThrVal...

FIG. 12B

NEW SHEET

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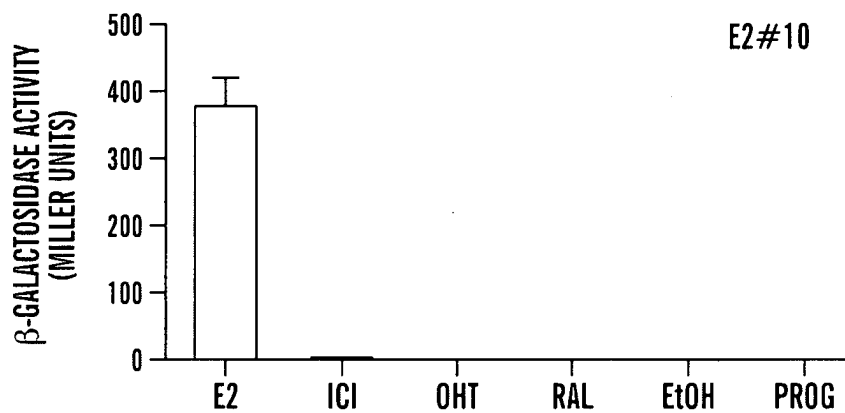


FIG. 14A

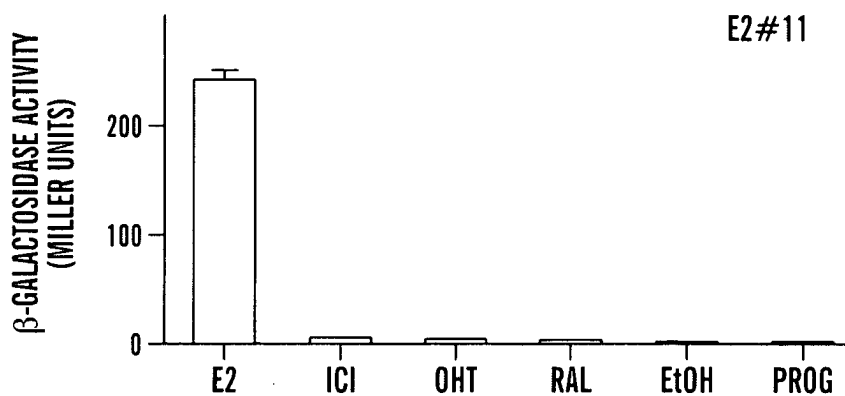


FIG. 14B

NEW SHEET

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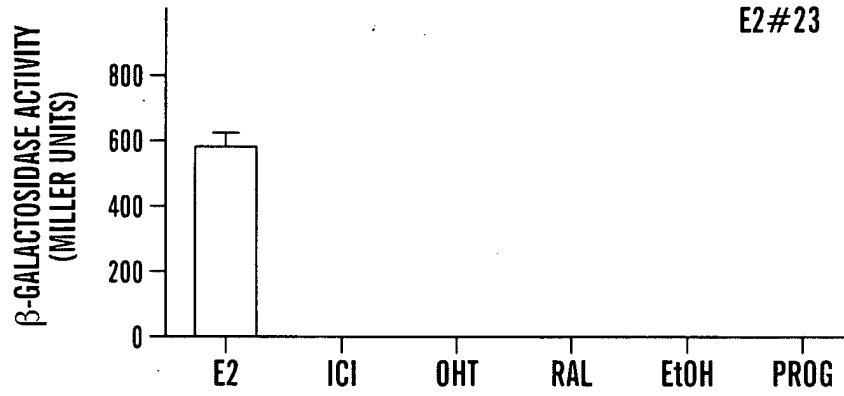


FIG. 14C

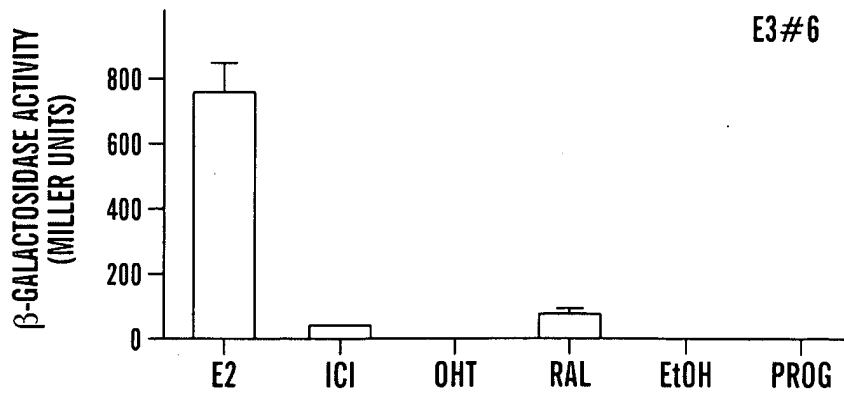


FIG. 14D

NEW SHEET

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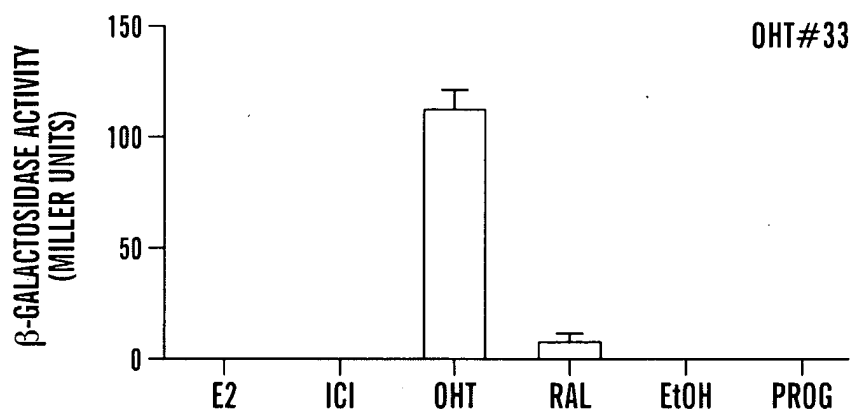


FIG. 14E

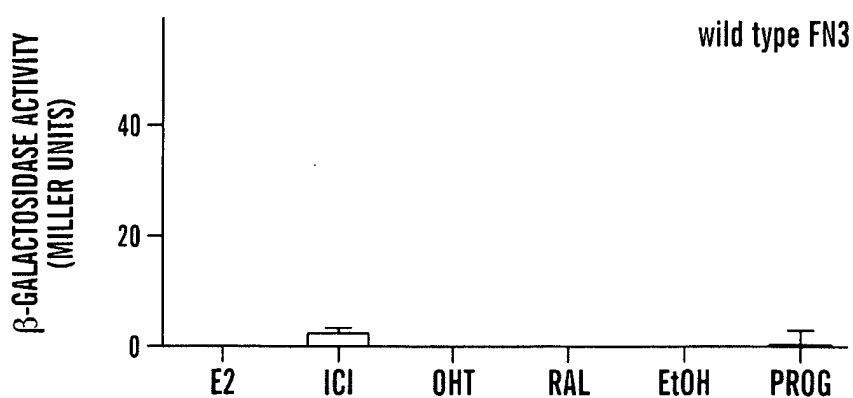


FIG. 14F

NEW SHEET

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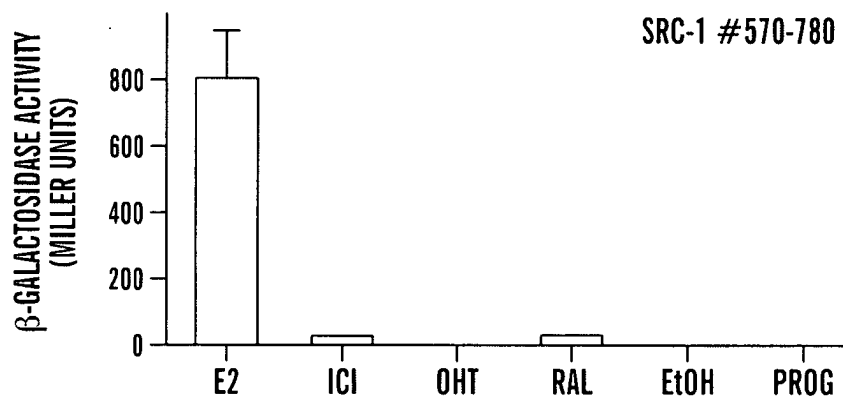


FIG. 14G

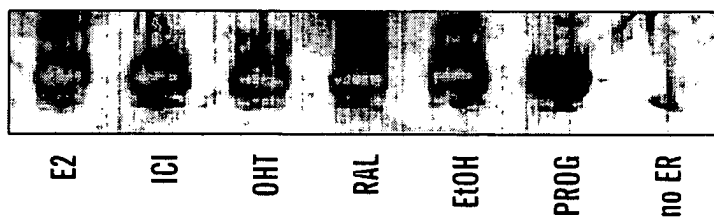


FIG. 14H

NEW SHEET

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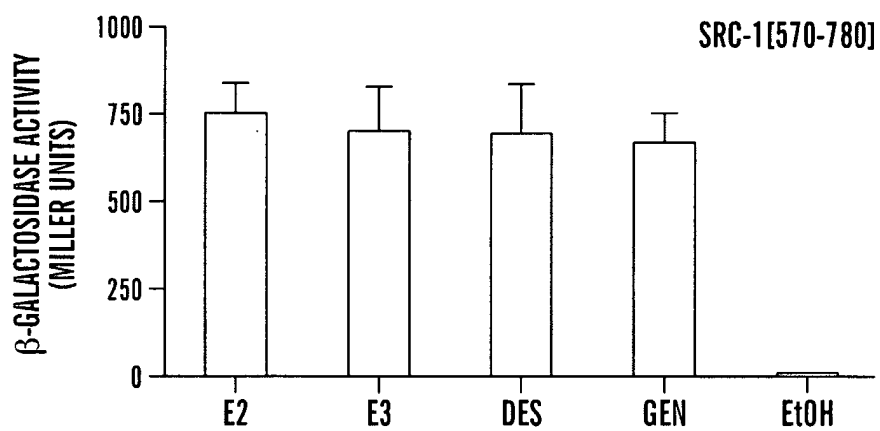


FIG. 15A

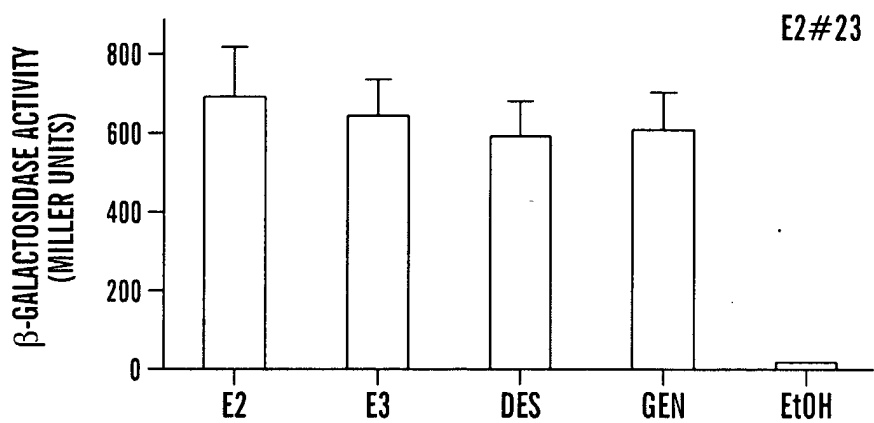


FIG. 15B

NEW SHEET

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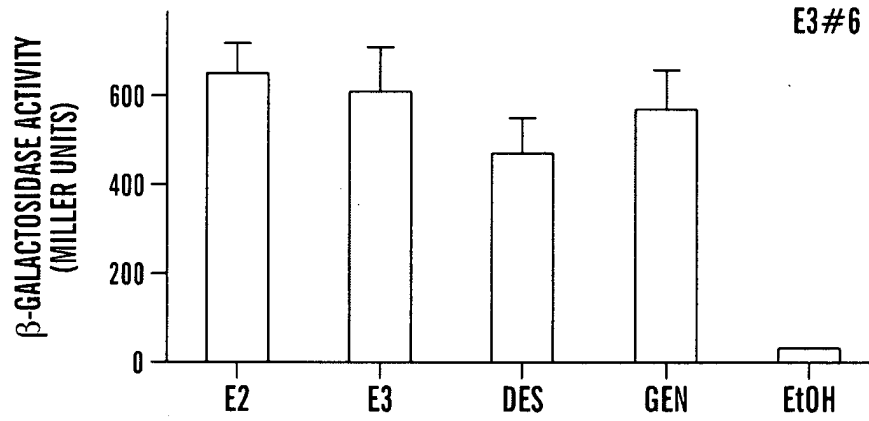


FIG. 15C

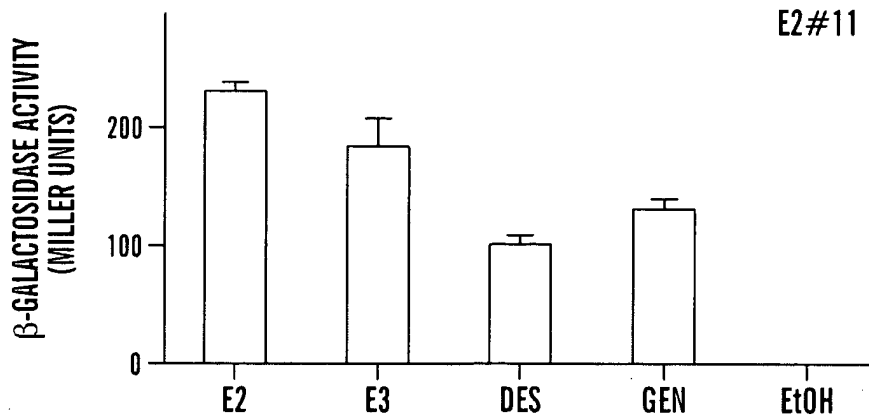


FIG. 15D

NEW SHEET

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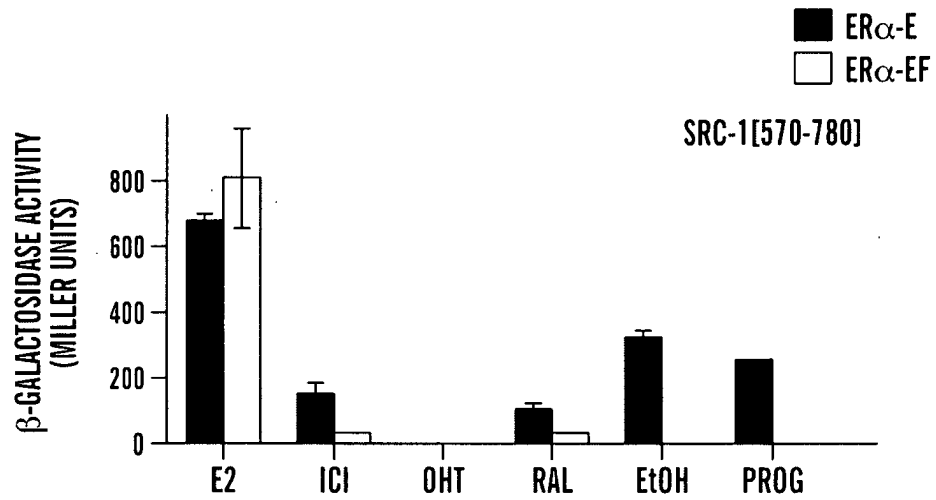


FIG. 16A

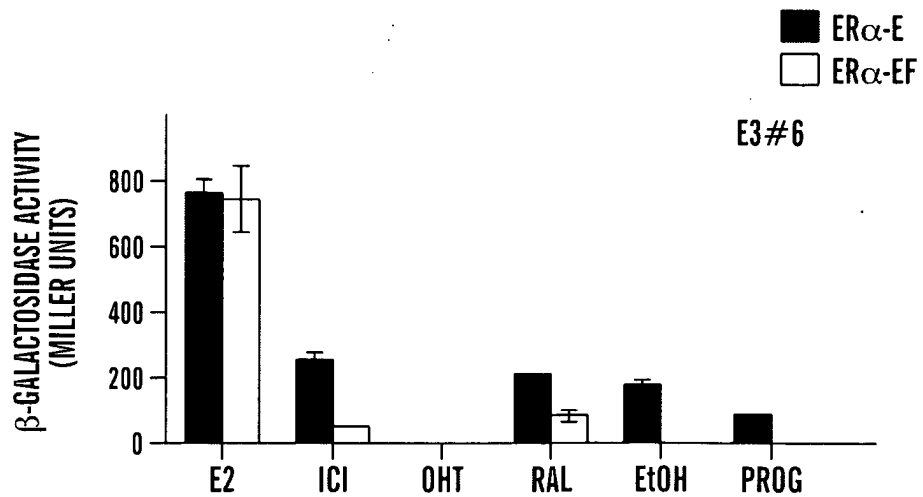


FIG. 16B

NEW SHEET

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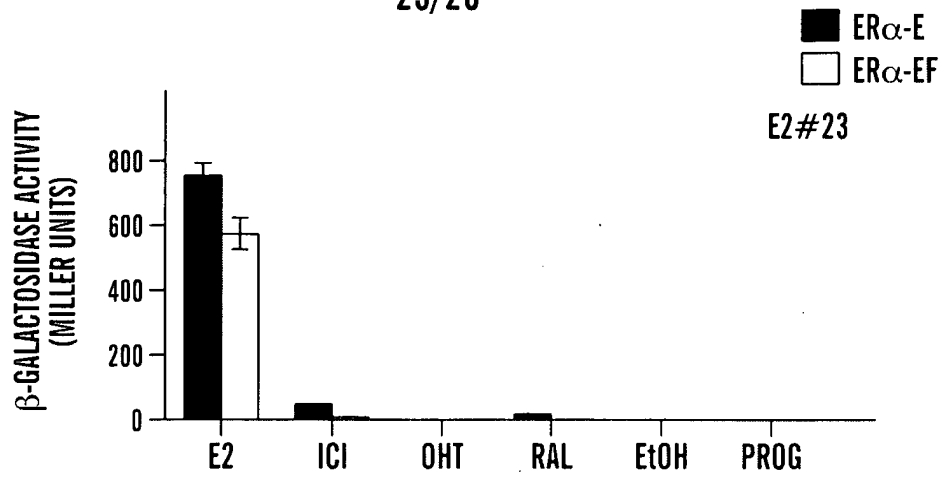


FIG. 16C

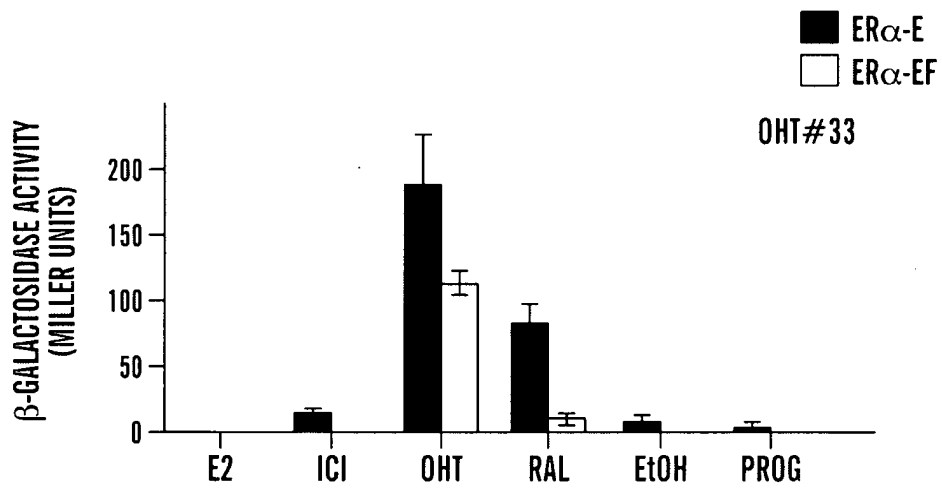


FIG. 16D

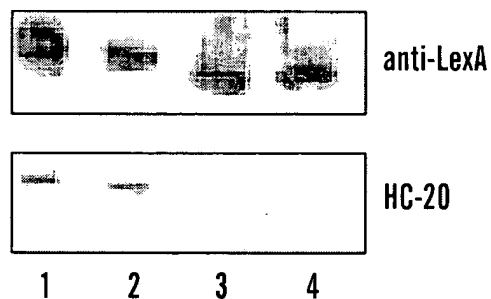
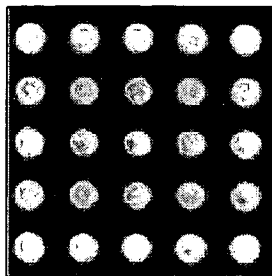


FIG. 16E



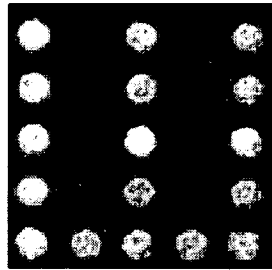
NO SELECTION
(MASTER PLATE)

FIG. 17A



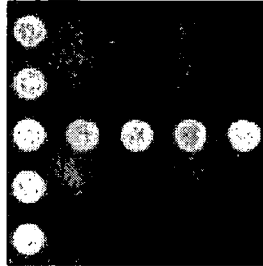
NO LIGAND

FIG. 17B



ESTRADIOL

FIG. 17C



HYDROXY
TAMOXIFEN

FIG. 17D

NEW SHEET

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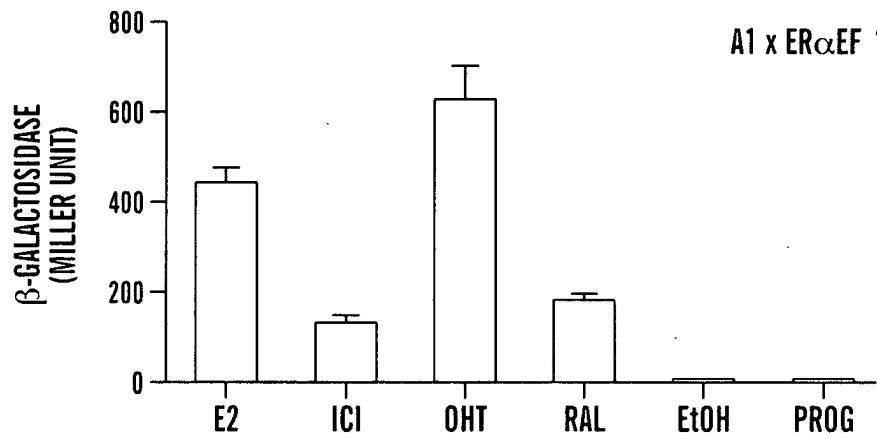


FIG. 18A

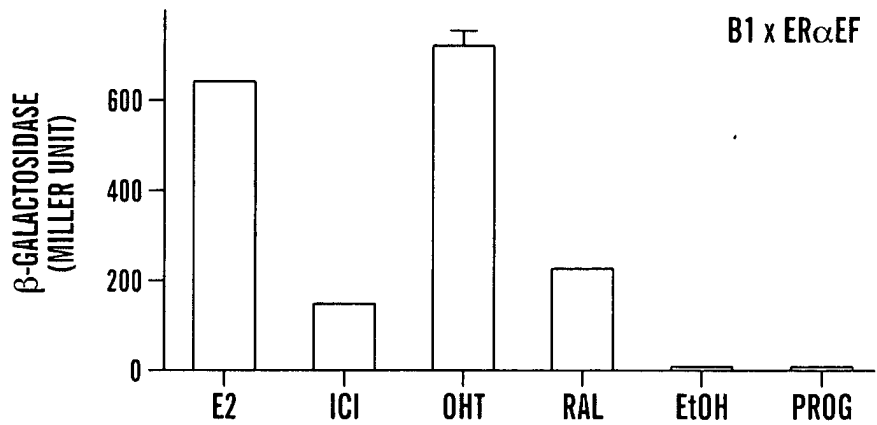


FIG. 18B

NEW SHEET

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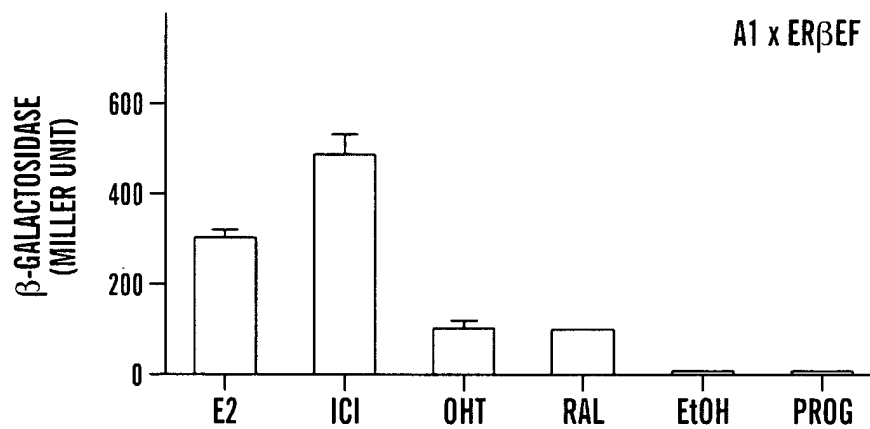


FIG. 18C

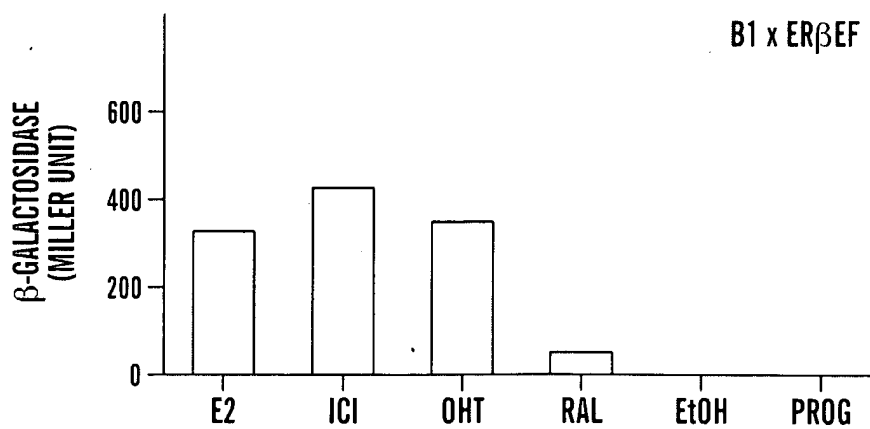


FIG. 18D